**Exploring the role of reflection in musical learning of performance undergraduates: Implications for teaching and learning**

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**Abstract**

How do university undergraduate musicians mature? This research project focuses on the self-reported behaviours of both popular and classical musicians taking the performance module. Students submit an annual reflective essay documenting their experiences of musical learning, which generates data that have been analysed to identify common practice behaviours, irrespective of musical genres. The analyses have allowed the teaching team to advocate the adoption of a more holistic view of practice. Initial findings suggest that assessed written reflection, combined with keeping a practice diary each year, increases the likelihood that students will think consciously about *how* they practise and point towards the development of independent learning skills and an understanding of metacognitive practice strategies.

**Keywords**

Practice, performance, reflection, metacognition, classical music, popular music, musical learning, maturation

**Background**

Historically, music education research has centred on Western classical musicians. In this context, it is well documented that practice is a key part in the development of musical excellence (e.g. Austin and Haefner-Berg, 2006; Papageorgi et al., 2010). Classically-trained musicians apparently report 10,000 hours or ten years of practice to reach professional standards (Ericsson et al., 1993). The traditional model of musical learning for classical musicians implies many solitary hours spent working firstly on technique, and later on interpretation, based upon one-to-one instrumental or vocal tuition (Platz et al., 2014:1). In an attempt to explain the phenomenon of practice by classical musicians, researchers adopt many different approaches. Miksza (2011), for example, offered a tripartite division between the individual, a comparison of student and teacher views, and changes in approaches to practice over long periods of time. Despite this attempt to find synergies, there is no overall consensus about practice behaviours, because it would seem that within the broad context of musical learning, there is no single way to become an expert musician. Similarly, Hallam (2001:28) investigated expert practice and conceded that even the description of an expert does not lead to a neat definition of how they become experts: ‘They know how to do the right thing at the right time. There is no single expert way to perform all tasks.’

In the absence of consensus about what an individual does to become an expert, we consider the strategies that are thought to support learning which may variously be grouped under titles such as metacognition, self-regulated or independent learning. Outside the field of music, Zimmerman (2002) described how high school students in the United States were helped by their teachers to develop self-regulated learning strategies, which he links to metacognition. The key elements which promote more effective self-regulated learning include setting proximal goals, self-awareness, monitoring progress, self-motivation, effective time management, attributing causation to outcomes and the ability to apply and adapt newly gained knowledge to future behaviour and skill development.

Nielsen (2012) conducted research into self-regulated learning and epistemic beliefs with 130 first year students at a conservatoire in Norway. Her focus was to discover what kind of epistemic beliefs students held regarding their instrumental playing, and how these beliefs were related to their practising strategies. The musical experience of the sample population was predominately classical (80%), with 20% working in rock, pop and jazz genres. Her study (2012: 355) revealed that students who believed that their own abilities could be developed used both metacognitive and effort regulation strategies. Moreover, she also concluded that students, whatever they believed about their own learning, did not necessarily develop metacognitive strategies in a linear way.

There would seem to be a need for more than metacognitive strategies in educating expert performers, as the Investigating Musical Performance (IMP) study by Welch et al., (2008: 151) demonstrated. Researchers collected data from questionnaires sent to 170 classical, jazz, folk and pop musicians and discovered that for non-classical musicians, networking, communication skills and playing for fun were important factors for musical development. The authors’ findings suggested that ‘the context of learning and the prevailing institutional culture are related to students’ approaches to learning and performance’.

Thus, in an institution with separate departments for classical and popular music, one might expect different learning behaviours, dependent on genres. This separation might also culturally underpin the view expressed by Creech et al., (2008:215) that musicians in different genres identified different specific skills which could lead to excellence in musical performance.

Green (2002) explored how popular musicians learn and identified important differences compared with classical musicians and reported, for example, that popular musicians are largely self-taught, and influenced by peers and admired musicians. Much learning in popular music takes place collectively and is thus socially situated.

As Parkinson (2013:155) outlined, there has been a clear shift towards popular music courses in the last twenty years , which makes it all the more relevant, as Feichas (2010:58) suggested, that ‘… the traditional teaching approaches for music in higher education are possibly inadequate for educating university students from varied music learning backgrounds, especially those with informal music learning backgrounds’. This echoes the findings of Folkestad (2006:143), who emphasised that musical learning, exists on a continuum between formal and informal approaches to teaching and learning.

**The role of reflection in musical learning**

Reflective practice was introduced by tertiary educational institutions in England, Scotland and Wales over the last two decades as a form of self-assessment, derived from theories of reflective practice that were developed by Schön (1987) and refined for educational practice by Ghaye (2011), among others. For example, music educators like Nicol and Macfarlane-Dick (2006) and Daniel (2001) have described the use of video to stimulate reflection after musical performances. Daniel (2001: 224) also discovered that writing a reflective essay encouraged reflection about performance skills. These comments echo the findings of Clark et al., (2014) who found that learning and practice behaviours are linked to levels of expertise, and suggested that conscious, stimulated reflection is useful to analyse past actions and could be a catalyst for conscious change.

**Background to the performance module**

The university admits 65 students each year to read for a BA honours degree in classical or popular music. Students on the performance module are expected to keep a practice diary in all three years of study, in which they report on their experiences of practice, performance, going to concerts and gigs and their lessons with peripatetic music staff which are provided by the department. The practice diary, which may be hand-written or kept electronically, is used as the basis for the annual reflective essay (1,500-2,000 words) about practice and performance, which all students are required to write and submit for grading, accounting for 30% of their overall mark. The remaining 70% of marks are generated from assessed performance.

There is an important caveat here relating to students’ self-reported behaviours in a practice diary and a reflective essay, namely whether they are cue-conscious, and write what they want their tutors to read, or reflect what their tutors have said to them in seminars, in one-to-one coaching or in any other formal or informal conversations. The tutors at the university where our research is situated take care *not* to “instruct” their students how to practise. The emphasis is on a process of self-discovery, which is enhanced by discussions with peers and tutors. This concurs with Cowan’s approach (2013:4), based on thirty years of mentoring engineering students writing reflections:

I want to empower each learner supportively and without exercising authority […] I nudge the learners forward into Vygotsky’s Zone of Proximal Development where they can make more progress through prompting than they could manage on their own. I do no more than that. I certainly do not instruct, or tutor.

Furthermore, when there is a need to write a reflective essay for summative assessment, it would seem that students make more effort to keep their practice diaries. We believe that this combination of practice diary, assessed reflective essay and assessed performance may be unique for music performance modules at UK universities.

**Defining the process of musical learning for popular and classical musicians**

In order to find some common guidelines to be able to assess classical and popular musicians in parallel, we start from the concept of practice outlined by Ericsson et al., (1993) which describes deliberate practice as a learning process which involves planning, reflection and problem solving, combined with learning in a wide range of other situations which may be more informal, as discussed by Jorgensen (2011:4). Within the context of the undergraduate performance modules, we suggest a holistic definition of musical learning which includes reflection and is not limited to any musical genre. We start with a general definition of practice which encompasses both solo and group behaviours: ‘musical learning involves problem solving either individually, or in groups, leading to an outcome which demonstrates change and/or progress.’

“Problem solving” in this context includes individual thinking, planning and acting to solve, for example, a technical difficulty as well as discussions within a band to try new approaches until a solution is found, for example, for tightening a rhythm or getting backing vocals in tune. “Problem solving” may also involve conversations with course tutors, or specific interventions with peripatetic music tutors. This definition can be further refined to include the reflective element:

Musical learning involves problem solving either individually, or in groups, leading to an outcome which demonstrates change and/or progress. Reflection underpins the process of practice and rehearsal for the individual or the group by stimulating conscious thought about *how* practice is conducted, prompting choices about *how* the process can be improved and what strategies can be adopted to reach desired goals.

The definition of musical learning suggested above is posited by the lead researcher (first author), but is not a part of the performance module materials, or the published curriculum or reading lists. We discuss the value of this holistic model below in our findings.

**The research question**

In our research project, the aim is to understand the maturation of musicians through practice and performance, using evidence from their reflective essays, based on the following question:

How do the self-reported behaviours of undergraduate popular and classical musicians help us to identify similarities and differences in changes which individuals experience in the development of and their understanding of their own musical expertise?

For the purposes of this paper, we discuss the initial findings across two years of longitudinal research relating to the 2012-2015 cohort of students. A reflective essay from a classical musician illustrates the possible insights into musical learning which can be stimulated by the reflective process (PM, 2015):

The three-year classical performance module has revolutionised not only the way I approach practice, but also the way I approach performance and musical study as a whole. It has taught me that singing is not something that you just *do*. It’s something that you have to carefully consider and think about. It has taught me that rehearsal isn’t just singing through a few songs every night until everything accidentally falls into place. It is an academic pursuit, which requires careful evaluation and self-reflection before any sort of real improvement can be made. I like to think that over the past three years I have changed from a student who sings to a singer who studies.

This comment encapsulates the process of musical maturation which is the focus of our research, including the development of skills and an understanding of how learning occurs, involving reflection. Our research aims to discover to what extent this clarity of cognition is exemplified by all students, or only a few, and how there may be differences or similarities between popular and classical musicians. It must be stressed at this stage that we are reporting on initial findings, and any conclusions are tentative and will be followed by more in-depth research.

**Methodology**

The data for this project were drawn principally from the students’ reflective essays (n=94: 64 essays from popular musicians and 30 essays from classical musicians) which were made available to the lead researcher at the end of each academic year, after assessment results had been published. When comments were identified in reflective essays which needed further explanation, nine classical and eight popular music students were invited to participate in individual or small group interviews, which were audio recorded and transcribed for subsequent analysis by an independent typist to avoid any bias. Before data were collected from the 2012-2015 cohort, a small sample of reflective essays and practice diaries were discussed with the principal supervisor to agree the research methods outlined below.

We adopted a mixed approach to analysing the data, using both quantitative and qualitative techniques, a method which is commonly used in (music) education research, following Bryman (2006:100). Quantitative data have played a lesser role in this project, serving to show trends, such as, for example, in themes in reflective essays.

Qualitative data drawn from the reflective essays and interview transcripts were examined based on the principles of textual analysis. Following McKee (2003), we sought to gain an understanding of how students make sense of their practice behaviours. Repeated close reading of all the available narratives was considered to be the most appropriate method to gain an understanding of how students’ behaviour and attitude towards practice was changing, which is similar to the approach of Johansson (2013) and methods adopted by Green (2002) and Smith (2013) in exploring data from popular musicians who had been interviewed.

The value of the research project for the university’s Department of Music lies in trying to gain an explicit understanding of how reflection supports musical learning on the performance module, which could be shared within the university and beyond.

**Ethical considerations**

Ethical approval was obtained from the University Ethics Committee in October 2012, in line with BERA guidelines (2011). Performance module students were given information about the research project and all 47 signed a consent form to confirm that they understood the nature of the study, and could withdraw at any time for any or no reason. This form also offered an opt-in clause for taking part in interviews.

The lead researcher, as a full time music teacher in London and part-time doctoral student, has made considerable efforts to keep her distance from students when conducting group and one-to-one semi-structured interviews in order to avoid influencing the content of reflective essays. Furthermore, she is not involved in any assessment of student performances, and so cannot influence the grades that students are awarded by faculty staff.

**Findings – student reactions to the practice diary**

The Head of Performance adopts a multi-modal approach when introducing the notion of musical learning to first year classical musicians. He posits a model of musical learning, based on Harris and Crozier (2000: 108) which involves not only visual, aural and kinaesthetic learning modes, but also an intellectual dimension, which encompasses the conscious awareness of the learner of the task to be tackled. This approach also reflects a model of musical learning posited by Cantwell and Jeanneret (2004) which includes the domains of affective, cognitive and metacognitive learning. The 15 classical musicians are required to keep a practice diary and develop an awareness of how it might be useful for their musical development, as explained by one violinist in her reflective essay: ‘I have found the practice diary a very useful tool as I do now stop and think about the issues that I am having and try to write down as precisely as I can what is going wrong and how I can change this,’ (EJ, 2013).

Similarly, a saxophonist writes in his essay: ‘Practising is actually actively monitoring what you can’t do, while you practise,’ (AM, 2013). It is interesting that these two classical musicians are focusing on deficits in their playing, which may link back to Nielsen’s study (2012) of student musicians’ beliefs about their own abilities. This also illustrates that these students are doing more than merely listing the actions they took in a particular practice session. A potentially negative view of practice was also raised by popular musicians when the lead researcher presented her initial findings to the cohort. Many commented that reflection could lead not only to positive change and progress, but might also point to bad practice days, when no progress was made. This echoes Nielsen’s findings (2012) that musical development is not necessarily linear.

The approach from the tutor for popular musicians is more informal. He involves students in discussions at their weekly workshops, drawing on his professional experience as a performer. There is little or no reference to theories concerning reflection, which may be an indication of a cultural reluctance of popular musicians to adopt formal teaching strategies, as discussed by Robinson (2012). None of the popular musicians mentioned a practice diary explicitly in their first year reflective essays, despite each having submitted a diary at the end of the year.

When the popular musicians wrote their reflective essays, they described what happened without necessarily asking *how* they were playing or singing. Were they conscious of the process of practice? What does emerge is that, with the focus on performances in tutor-assigned bands in December and May, many of the students identified barriers to their musical learning. These include lack of commitment, absences from rehearsals, inter-personal conflicts, arguments about repertoire and being forced to play with people who they did not consider to be their friends. This might suggest that the practice diary, per se, is not useful for these popular musicians in their first year. But perhaps it is also important to understand, as the Head of Performance explains, that the practice diary is not essentially reflective:

I don’t think a diary, if it’s visceral and therefore real, can be reflective. It’s mixing two things up and it falls into the same trap of “You’ll get better by doing”. If you do a diary, you’ll become reflective. I don’t think that’s true. If you do a diary, it is merely a log, (Shorrocks, 2015).

Furthermore, he recognises that the popular musicians are learning collaboratively, which offers an aspect of learning which may be lacking for the classical musicians:

They work in groups and they learn in groups and they are quite often self-taught, which means that they can invest a bit of their curiosity and self-thinking in it, which an awful lot of classical musicians have sterilised out of them. If your only model is ‘Do what teacher says and do the repetitive practice’ then you’re not getting the benefit of what an awful lot of the poppers do, (Shorrocks, 2015).

One of the contrasts between the two performance modules was a strong focus on the practice diary and reflection for classical undergraduates, especially in the first year, whereas for the popular musicians, the practice diary was not discussed to the same extent in workshops. In order to understand this difference better, a group interview was conducted with four popular performance students from the 2013 intake who chose to attend both classical and popular performance workshops in their second year. One guitarist commented on the benefits of starting to use a practice diary in his second year:

It’s more personal and that is what I find the practice diary really useful for, because I didn’t keep a personal practice diary last year. I find it is really handy for getting inside your own head, and trying to understand what the way forward is for me, (HM, 2014).

The Head of Performance recognises that his initial reservations about *not* teaching students about the practice diary have gradually changed as a result of being involved with the current research project, as he explains:

For [new] first years, I’m doing more on the means of practising than I’ve ever done. I think that’s because I have felt a need to get people to study that more. I’ve done even more with the current second years, I did quite a lot last year with the cohort we’re watching, and that did seem to help, because halfway through their course, I went back to thinking about practising and see what’s developed (Shorrocks, 2015).

Whilst this comment demonstrates that the Head of Performance is thinking about the ramifications of his interventions to students about how to practise, we turn now to the student accounts to see how they perceive their own progress in musical learning.

**Findings - Main themes in reflective essays (First Year)**

**Figure 1 Main Essay themes**

For the first year, themes were consistent for both groups of musicians regarding the most frequently cited elements which might be deemed relevant to musical learning. Figure 1 above shows percentages for the three most frequently cited themes. Comments on *technique* are generally linked to students’ descriptions of one-to-one tuition. *Insight* is used for self-reported instances of practice behaviour in which the student goes beyond narrative description to identify what change can be made to a practice routine. *Targets* relate to descriptions of specific practice or performance goals. Taken together, these three themes link back to the model suggested for musical learning as all these behaviours could be considered to be part of problem solving.

For example, a classical saxophonist recognised the difference between merely playing through a piece and thinking about *how* he is practising:

Throughout the year I have learnt that there is a difference between simply just playing through a piece and actually practising a piece. […] I now question myself more as to why I cannot do certain things and try and find solutions, (AM, 2013).

Conversely, a popular musician who plays the guitar noted the benefits of the wide range of musical experiences during his first year:

By jamming along to and transposing songs from a wide range of different genres from hip-hop to deep house, I have gained an insight into alternative scales, intervals, phrasing and percussive techniques that can be used to great effect in creating original sounds (CS, 2013).

As the Head of Performance points out, popular musicians may have quite different ideas about the benefits of developing individual technique:

The whole thing about the pop world is that they’re going to do that solo that way because that’s the way I can do that solo, rather than ‘I really ought to be aspiring to do a solo in this way, I’ve got a little bit of technical practice to do to support it’ (Shorrocks, 2015).

The whole culture of popular music education - as Parkinson (2013) explains - is contrary to the accepted norms of the Western musical tradition. The change towards a more disciplined practice regime begins to emerge, as we discuss below, in the second year reflective essays.

**Findings - Main themes in reflective essays (Second Year)**

The second year reflective essays tackled different areas of practice as a result of the content taught in performance workshops. Classical musicians learn about intonation, whilst the popular musicians continued to perform to their peers, focusing on the development of original material in their own choice of bands. Students’ comments suggested that they were beginning to think more carefully about *how* to solve musical problems and thus rehearse more effectively. The data show a change from 48% of first year popular musicians writing about insights into practice, compared with 56% in the second year.

At this stage, at the end of the second year, the process of self-discovery is revealed in different ways, dependent on the environment in which students are practising and performing. However, if we make a direct comparison between the three areas of focus for the first and second year essays for popular musicians, the data point to an increased focus on technique and discovering insights about how to practise (see Figure 2 below).

**Figure 2. Comparison of Essay Themes, Second Year Popular musicians**

As an example, one bass player explained in detail how a newly-formed band *‘Defunkt’* worked in the second year:

We began to plan our practice slots more carefully, running through the songs we had, consecutively and collectively discussing ideas for new songs with a hands on approach to playing them as we discussed what direction to follow, and focusing on sections of songs that we felt needed work instead of wasting time by running through the whole song, (JG, 2014).

In comparison, classical musicians examined their individual practice behaviours in more depth and described the development of some metacognitive practice strategies such as breaking a piece into smaller sections, playing slowly and increasing the tempo:

I feel that my practice this year has been a lot more productive. I would immediately find the problem or specific sections of a piece before trying to play it through. Also, I took a slightly different approach to sections that I struggled with, taking a bar at a time and repeating it over and over again to get it into muscle memory. This helped me to play difficult sections and get them up to speed (AM, 2014).

Mental rehearsal is another aspect of practice which is linked to the use of metacognitive practice strategies. A viola player wrote almost exclusively about what she heard in her head, and what she thought about: ‘I am imagining what can be done, and how I could be improving. The music is clearer and louder in my head, as is the image of the viola when I am not practising,’ (SB, 2014).

Taken overall, our quantitative and qualitative data point towards the students’ increasing understanding of *how* to reflect upon their musical learning and how to make their individual and group rehearsal sessions more effective, by thinking about how they can make changes to the process.

**Discussion – Student musical journeys**

We would suggest that it is also worth considering musical maturation in a broader context. As the Head of Performance explains, ‘…students arrive inhibited by their prior musical experiences. They see themselves as poppers or classical musicians, and are determined to stay in that preferred genre,’ (Shorrocks, 2015).

Looking back to our suggested model for musical learning, there is nothing explicit which points to a need to make students aware of wider opportunities for musical development. Nevertheless, by virtue of their environment, students are exposed to many different kinds of musicking and they can explore many musical genres, including jazz, folk and world music, either through university-based ensembles or groups based in the city. Thus each student can create his or her own personal musical learning journey, based upon their individual needs and cultural preferences. Over the last three years, there have been examples of a bass guitarist playing cello in the university symphony orchestra, a classical singer conducting a popular music choir, classical string players gigging in an acoustic folk/rock band, a rock guitarist working in the pit band for a musical theatre production and a classically-trained popular vocalist leading a barbershop quartet which appeared in a BBC One television programme. For the 2012-2015 cohort, ten out of 47 undergraduates have been involved in cross-genre musicking. The impetus for such musical exploration comes either from the individual, from peer groups, or may be suggested by the performance tutors or peripatetic music staff. Whilst the Head of Performance states that it would be counter-productive to market this cross-genre musicking to prospective students, he acknowledges that such musicking is effectively prompting more synergies between the two performance modules:

There is probably a growing commonality [between the two courses] – probably more than I realise – and at a surface level, that commonality will be the last thing to be apparent. For example, I get them all to work in ensembles, which is important for the classical people. I don’t have to worry about that in terms of the poppers. They know how to do that, (Shorrocks, 2015).

This comment suggests that the act of reflection is opening up opportunities for students to explore new musical genres as well as prompting the faculty to reflect on course design and also gives some credence to the concept of a holistic model for musical learning. A full examination of the experiences of these cross-genre musicians is a possible area of focus for future research.

**Conclusion**

In summary, the data show that the first-year classical musicians began to think more about technique, and about how to improve their technique related to personal targets compared with their popular musician peers. The popular musicians, in contrast, focused more in their first-year reflective essays on the social processes of band formation. If the members of a band did not get on, or could not organise their rehearsals effectively, the data suggest that their musical learning was hindered, which is reflected by the lower levels of reported reflection about technique, insights and targets.

In the second year, the data show that popular musicians were developing more awareness of individual and group practice routines, and were beginning to identify insights into how they could improve the process. Crucially, they were now in bands of their own choosing, which is likely to be why the lack of commitment reported by 53% in the first year reduced dramatically to only 9% in the second year. Over 90% of the second-year classical musicians provided evidence which demonstrated that they were developing their understanding of how to practise using a range of different metacognitive strategies, which reflect the elements in our suggested definition of musical learning.

Whilst the third-year reflective essays have not yet been analysed, interviews which have been conducted during the 2014-2015 academic year point to developments in a wider musical context. For example, two of the popular musicians in the third year were already working professionally as session musicians and there is a third year band, *The Sneaky Nixons*, which has been signed by a distribution agent and producer, whose members are getting their first taste of commercial management. Whilst it is definitely not a stated purpose of this university performance course to produce professional musicians, as might be expected from a conservatoire, tutors can, perhaps, claim that their music performance graduates have acquired some lifelong reflective skills to improve as musicians, as the Head of Performance explains:

I like people to be able to work within what they can already do, knowing that gradually if they wanted to go up a level, hopefully they’re equipped by the structure of the course - diaries etc.- to do that, should they wish to. They can really change things because they’re equipped with the mechanisms, the psychological insights and the skills, (Shorrocks, 2015).

The key point here is that the unique combination of a practice diary, the annual assessments through the reflective essay and performances seem to support the students in their journeys of self-discovery and musical learning. Future research into student musical biographies, and how these change during the three years of study, combined with reflective essays and interviews, may offer some answers.

In conclusion, we would suggest that there is much to be gained from adopting a wider definition for musical learning, supported by practice diaries, reflective writing and performance. Preliminary findings for both classical and popular musicians point to a deeper understanding of how to practise, as a result of assessed reflection. We believe that as we continue to develop our understanding of reflection and musical learning, more elements will emerge which will be of interest to those running multi-genre performance courses in tertiary education.

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